Opinion of the European Economic and Social Committee on 'The effects of digitalisation on the services sector and employment in relation to industrial change'

(exploratory opinion)

(2016/C 013/24)

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In a letter dated 29 June 2015, and in accordance with Article 304 of the Treaty on the Functioning of the European Union, Nicolas SCHMIT, Minister for Labour, Employment and the Social and Solidarity Economy, acting on behalf of the future Luxembourg presidency, asked the Committee to draw up an exploratory opinion on:

'The effects of digitalisation on the services sector and employment in relation to industrial change'

(exploratory opinion).

The Consultative Commission on Industrial Change (CCMI), which was responsible for preparing the Committee's work on the subject, adopted its exploratory opinion on 15 July 2015.

At its 510th plenary session, held on 16 and 17 September 2015 (meeting of 16 September 2015), the European Economic and Social Committee adopted the following opinion by 139 votes to one, with eight abstentions.

1. Conclusions and recommendations

1.1. Digitalisation transforms all segments of society and the economy and thus logically affects work and employment as well. Digital technology has the potential to increase wealth to unprecedented levels and can boost the quality of work and employment in Europe. However, these opportunities come with risks attached, as is evident in all economic sectors, also including the private service industry (1).

1.2. On the one hand, the innovative services and business models that digitalisation makes possible yield previously unimagined gains in service productivity and enhance consumer choice (2). On the other hand, they have considerable consequences for the labour market and work organisation, such as greater income disparities and reduced access to social security systems, which can be prove negative for some workers if not properly countered.

1.3. The employment effects of service digitalisation therefore warrant political attention and management. Pro-active policymaking at the EU and national levels can and must ensure that the evident potentials of digitalisation can be unlocked while its pitfalls are avoided. With its Digital Agenda for Europe and the Digital Single Market initiative, the EU is an active player in the field of digital policy. However, most of the employment effects of digitalisation remain unacknowledged and thus are poorly addressed by relevant policies.

1.4. Digitalisation certainly is one of the most dynamic developments of our age, in which opportunities and risks are closely intertwined. Future developments are likely to be of a complex nature, with start-ups, small companies, and flexible operations emerging alongside traditional companies and industries. To date, the employment effects of such developments are not fully understood and cannot be predicted with precision. Therefore, fears about declining employment rates are mounting at the same time as skills mismatches persist in EU labour markets. Constructive collaboration and increased awareness among the main actors, i.e. governments and the social partners, are key in this situation. The broad variety of socio-economic structures and different levels of economic development in the EU may well require specific analyses and approaches to manage the effects of digitalisation on labour markets and employment.

(1) This opinion refers to private services sectors as defined in standard statistical classifications (e.g. NACE Rev. 2 F-N; Q-T).
1.5. The EESC highlights evident challenges in the area of service sector employment stemming from digitalisation and sets out the following recommendations for their political management:

1.5.1. In order to provide the EU workforce with the skills it requires in the digital age, public and private investment in vocational education have to be promoted and it must be examined whether European measures are required in order to generalise across the EU the positive experiences in Member States regarding training leave.

1.5.2. A broad dialogue should examine in more detail whether and to what extent employees’ private lives require additional protection in a time of ubiquitous digital mobile communication and which measures, whether at national or European level, are appropriate in order to limit this universal availability/reachability. Similarly, smart measures will have to be considered to empower the growing number of self-employed in this respect.

1.5.3. Better statistics and research on the service industry are needed (at global and European level) to deliver detailed forecasts of developments in the labour market and of the polarisation of work, employment and income. Horizon 2020 should therefore provide adequate funding for research into employment in the service industry. Moreover, detailed and frequently updated statistics are urgently needed depicting the proliferation and growth of non-standard forms of employment, including data on practices such as crowdsourcing.

1.5.4. In order to counter the rise in income inequalities that are partly driven by digitalisation, collective bargaining should be promoted at all levels, especially in sectors and businesses that are affected by digitalisation. This can ensure that new forms of digitalised work organisation improve rather than deteriorate job quality.

1.5.5. Robust provisions concerning the protection of personal employee data are needed to protect established standards of privacy at work. European legislation on data protection should set high minimum standards and must not prevent Member States from regulating further. The EU data protection regulation currently being negotiated should therefore contain an ‘opening clause’ allowing Member States to go beyond EU minimum standards.

1.5.6. The EU and Member States, in consultation with the social partners, should consider strategies for adjusting the scope of social and labour standards so that they reflect the conditions of a digitalised working environment.

1.5.7. The new Industry 4.0 industrial cycle and digitalisation affect the whole of society. Constructive dialogue between the social partners, the Member States and the EU is called for to discuss the consequences for the labour market and possible and necessary adjustments in the field of social and labour law. Some very promising initiatives have been introduced recently by governments and the social partners — in Germany, the Netherlands and Austria, for example. In each case the specific features of national developments and their prospects will have to be taken on board. Best practices should be disseminated.

1.5.8. The EU, national governments and the social partners should initiate debates with a view to defining political measures and legislation that ensure appropriate levels of mandatory social protection for the entire workforce — including those in non-standard forms of employment.

1.5.9. The general macroeconomic conditions vary considerably between Member States. The general macroeconomic conditions vary considerably between Member States. In order to bolster employment despite declining demand for labour, potential problems need to be identified through discussion involving all stakeholders and the corresponding strategies established in line with individual Member States’ requirements (e.g. including in the sphere of public investments, job-creating innovation and distribution and reduction of work).

1.5.10. Reforms of the tax systems need to be reviewed carefully to ensure similar levels of taxation for all forms of income, whether it is generated in conventionally organised sectors or in the sharing economy. To ensure the sustainability of the social security systems in the future and to reduce the burden on the labour force, it should be examined whether part of the digitisation dividend could be used for this purpose.
2. Introduction: structural change in services

2.1. Recent years have seen major breakthroughs in the development of digital technologies. The new and extremely powerful capabilities of digital technologies allow for the automation of ever more tasks and occupations (e.g. the self-driving car, the internet of Things, Industry 4.0). Additionally, digital technologies are leading to drastic reductions in search and transaction costs and thus enabling the development of entirely new and highly scalable business models in services (e.g. online marketplaces and platforms including the so-called sharing economy, Uber, Airbnb). This is encouraging the digitalisation of business models and processes in a wide range of economic sectors. Some of them have already been addressed in previous EESC opinions (3).

2.2. Digitalisation entails major change processes and restructuring in almost all sectors of the service industry (4), which, until very recently, was thought to be resistant to technological rationalisation. Services were long seen as supporting other parts of the economy (e.g. agriculture, mining, manufacturing and construction), households and consumers and as a mostly passive user of new technologies. However, the advent of the internet combined with the liberalisation of telecommunications services has changed the role of services substantially.

2.3. The impact of these developments on employment in the affected sectors has built up slowly over the past decades but is now gaining pace. Some of the effects of digitalisation on employment in services are already visible, including:

— new skills requirements applying to the service workforce,

— labour-shedding investments as technology is becoming cheaper and is increasingly able to take over tasks that were previously reserved for human labour. At the macro level, this has led to declining demand for labour in traditional industries, with a lower share of GDP going to labour (5),

— declines in the demand for medium- to high-skilled labour, which is expected to drop even further in the near future. According to various estimates, roughly 50% of today’s jobs are at risk of being replaced by digital technology in the next 20 years (6). However, experience shows that predictions of this kind have to be treated with caution.

2.4. Digitalisation currently promises to boost productivity to unprecedented levels and thus yielding a ‘digitisation dividend’ as well as — and this is the other side of the coin — reducing the demand for labour — particularly for medium-skilled workers — substantially. The latter goes hand in hand with rising unemployment, the ‘erosion of the middle class’ and further increases in income inequalities (7).

2.5. Currently, US-owned firms are dominating the digital economy, while Europe has largely lost out in the development of digital technologies. Likewise, Europe seems to be ill-prepared for the fundamental changes induced by digitalisation affecting our economy and society (i.e. the already-mentioned massive productivity gains and the threat of creating imbalances that may lead to stark rises in unemployment among certain categories of workers and a further polarisation of society), which is cause for concern.

(3) Including: Impact of business services in industry (rapporteurs: van Iersel and Leo) — (OJ C 12, 15.1.2015, p. 23), which outlines the specific characteristics of the fourth industrial revolution.
(4) Definition of service industries as commonly used in statistical classifications.
(7) See footnote 10.
2.6. While it is impossible to forecast the outcome of technology-induced change at such a large scale, it is clearly necessary to call on the EU to take on an active role in shaping these developments and in managing their effects on employment and society — especially as such an active role is currently very far from being a reality (\(^8\)). This opinion seeks to rectify this by discussing the impact of digitalisation on employment in services and issuing related policy recommendations.

3. Transformation of skills needs

3.1. As a logical consequence of digitalisation, digital technologies are being introduced into a growing number of workplaces in the service industry. For instance, almost 60% of employees in the banking sector report the introduction of new technologies into their workplaces during the past three years (\(^9\)). Employees require specific competences, i.e. ‘e-skills’, to become proficient operators of such technology. This means that curricula in vocational education and training need to be updated accordingly and related training measures implemented.

3.2. However, official Commission data points to major bottlenecks in the area of skill formation, estimating that 47% of the EU workforce lack sufficient e-skills — although marked differences exist between countries (\(^10\)). Along with wasting opportunities for job creation, this ‘skills mismatch’ may hamper the development of the digital economy and thus harm EU competitiveness if left unresolved.

3.3. Reliable knowledge concerning skills needs and gaps is required in order to address this skills mismatch in curricula. Indeed, the EU is already active in this field, particularly through agencies such as Cedefop. Allowing the social partners to take the lead in such ‘skills intelligence’, for instance in the form of sector skills councils, has already proved a successful practice. Against this background, it is regrettable that the Commission is considering weakening their role by replacing social partner skills councils with multi-stakeholder skills alliances. However, as the problem of the skills mismatch persists despite the skills intelligence available, the lack of strategic implementation and investment would seem to be the chief problem.

3.4. The promotion of public and private investment in vocational education and training is key. Some Member States have introduced minimum entitlements to paid educational leave. It should be examined whether this is a useful instrument for employers and employees alike to gear skills towards needs and whether European measures are needed to introduce this possibility across the EU.

4. The polarisation of work organisation and income

4.1. Changing skills requirements are entwined with transformations in work organisation, i.e. the tasks that employees fulfil and how they fulfil them. In this area, digitalisation is currently leading to the gradual polarisation of service employment in terms of work autonomy and wages, meaning that service jobs are more likely to be situated at either the high or the low end of the wage and autonomy scale, with a declining number of jobs between the extreme poles. At the same time, we are also seeing new developments resulting from spontaneous adjustments in the labour market.

4.2. A digitalised service industry creates demand for labour performing knowledge-intense tasks, especially in professional and technical service occupations that, for instance, manage IT networks. The tasks performed by such professionals can typically be carried out remotely and at any time by using mobile digital devices.

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4.3. Such flexible work organisation typically provides employees with high levels of work autonomy and entails the potential to improve job quality, increase and facilitate the reconciliation of work and family life. However, such flexible forms of work also create risks if employees are or feel obliged to remain available for work at all times. Such ‘work without boundaries’ may cause stress and burnout.

4.4. A broad dialogue should examine in more detail whether and to what extent employees’ private lives require additional protection in a time of ubiquitous digital mobile communication and which measures, whether at national or European level, are appropriate in order to limit this universal availability/reachability. Smart measures should also be considered to strengthen the position of the growing number of self-employed workers in this respect.

4.5. In other sectors, job autonomy is decreasing through services digitalisation. This is occurring, for instance, in e-commerce logistics centres, where routine-heavy jobs are created. In such forms of work organisation, employees typically receive detailed instructions through digital devices concerning which item to pack into which box.

4.6. Due to their standardised and relatively simple nature, such routine forms of work create accessible job opportunities for low-skilled people and labour market entrants. However, the quality of such work is often perceived as low because employees feel their skills and abilities are not fully harnessed.

4.7. Digitalisation certainly is one of the most dynamic developments of our age, in which opportunities and risks are closely intertwined. Future developments are likely to be of a complex nature, with start-ups, small companies, and flexible operations emerging alongside traditional companies and industries. To date, the employment effects of such developments are not fully understood and cannot be predicted with precision. Therefore, fears about declining employment rates are mounting at the same time as skills mismatches persist in EU labour markets. Constructive collaboration and increased awareness among the main actors, i.e. governments and the social partners, is key in this situation. The broad variety of socio-economic structures and different levels of economic development in the EU may well require specific analyses and approaches to manage the effects of digitalisation on labour markets and employment.

4.8. Better statistics and research on the service industry are needed (at global and European level) to deliver detailed forecasts of developments in the labour market and of the polarisation of work and employment. Adequate funding for research into service sector employment and work organisation should therefore be provided under Horizon 2020. Research findings must be put into effect by active employment policies that ensure that opportunities for high quality digital jobs are taken while risks are avoided. Additionally, the introduction of new forms of work organisation should be made subject to negotiation between the social partners in order to ensure that new forms of digitalised work organisation improve and do not deteriorate job quality.

4.9. With such tendencies towards polarisation in work organisation comes the polarisation of income, as also noted by the European Parliament (11). In some cases, this is facilitated by the absence or circumvention of collective agreements. For instance, this is the case where providers of digital services insist on the special nature of their business models to dispute the applicability of existing collective agreements to their employees. To that effect, some e-commerce companies insist that their workforce do not qualify as retail workers and are thus ineligible for collectively agreed retail sector wages.

4.10. In order to counter the rise in income inequalities that are partly driven by digitalisation, collective bargaining should be promoted at all levels, especially in sectors and businesses that are affected by digitalisation.

4.11. Workers in digitalised forms of work organisation produce large quantities of personal data, which contain information relating to where employees do what, when and with whom. Besides creating opportunities for highly efficient work in seamless flows of information, this also enables intrusive practices of employee surveillance that jeopardise established standards of privacy at work.

4.12. Robust provisions concerning the protection of personal employee data are needed to protect established standards of privacy at work. European legislation on data protection should set high minimum standards and must not prevent Member States from regulating further. The EU data protection regulation currently being negotiated should therefore contain an ‘opening clause’ allowing Member States to go beyond EU minimum standards.

5. Transformation of employment and labour market institutions

5.1. As information can be shared across large distances and among vast audiences at very little cost, digital technologies enable highly fragmented business models. This reduces the need for rigid, functionally and geographically integrated company structures with clearly defined staff, hierarchies, and premises.

5.2. Such developments increase companies’ ability to rely on flexibly contracted labour, for instance in the form of self-employed workers. Especially in services sectors, such as in ICT, media, or administrative and support services, recent growth in self-employment has been substantial (12). Practices such as crowdsourcing, i.e. online platforms allowing companies to publish tenders for work assignments for which freelancers compete, are expected to lead to further growth in self-employment. Moreover, competition for job opportunities on such crowdsourcing platforms is global, implying a competitive advantage for bidders from locations characterised by a low cost of living, low income tax rates and a low level of social security cover.

5.3. Some workers appreciate the flexibility offered by such employment arrangements. However, the strong growth in non-standard forms of employment could render established labour market institutions (such as employment protection legislation, occupational health and safety regimes, collective bargaining and social dialogue structures) partly ineffective. Additionally, with increased cross-border competition between jobseekers, for instance on crowdsourcing portals, such labour market institutions are coming under competitive pressure. It is for the national social partners and governments to find solutions to this by means of constructive dialogue in order to guarantee a fair and inclusive labour market for all employment arrangements in the future in the light of digital change.

5.4. Employment in the sharing economy proves particularly delicate in this respect. In many cases, the employment relationship and legal status of the parties involved remains unclear. The question of whether the driver of a private vehicle that can be hired via an online platform is self-employed or dependently employed, and if so, by whom — the passenger or the operator of the online platform — frequently remains unclear. This makes the identification of relevant legislation in terms of both employment and liability law, and collectively agreed provisions, a legal challenge. If none of the established categories of law and collective agreements were applicable, the sharing economy would indeed operate in legal grey areas. This may exert competitive pressure on employment and businesses operating within established categories of law and collective agreements.

5.5. Currently, reliable and up-to-date information on which to judge what employment policy measures are right for the sharing economy is missing. Detailed and frequently updated employment statistics on non-standard and new forms of employment are urgently needed to rectify this.

5.6. The EU and Member States should consider strategies for adjusting the scope of social and labour standards so that they reflect the conditions of a digital world of work. Related initiatives should take the form of structured dialogue with the social partners, in order to bring about practicable and evidence-based solutions that also take the interests of service users into account. Promising initiatives are already under way in Germany, the Netherlands and Austria.

5.7. As these developments also challenge established practices of social dialogue and collective bargaining, constructive dialogue between the social partners is called for to ponder possible and necessary adjustments. The European Union can be instrumental in encouraging such dialogue by providing funding for related social partner projects and by encouraging related research projects under the Horizon 2020 programme.

5.8. Digitalisation enables business models in service sectors to become much less labour-intensive. This is for instance the case in banking, where business processes have been partly automated and shifted into the digital realm. This renders part of the workforce redundant. Frey and Osborne (University of Oxford) expect that medium-income jobs and occupations, including some liberal professions, will be particularly affected by such automation (13). Digitalisation will also have a considerable impact on employment in the area of public administration and institutions, as well as on services of general interest as a whole — something that has not been given enough consideration to date. The EESC will therefore take a position on the matter in a separate own-initiative opinion.

5.9. The Bruegel think-tank estimates that EU Member States are at risk of losing between 40 % and 60 % of jobs during the next 20 years due to digitalisation-induced automation (14). Moreover, it seems that in the digital age, unlike in previous stages of industrial development, overall productivity gains in the economy no longer translate directly into employment growth (15). It therefore remains doubtful whether a fully digitalised economy produces sufficient demand for labour to make up for the estimated job losses brought about by service automation. On the other hand, there is still a skills mismatch throughout Europe, and it is difficult to make predictions.

5.10. Shifts in demand for labour in a digitalised service industry, measured in terms of hours worked, need to be monitored. In order to bolster employment despite declining demand for labour, and to avoid jeopardising social cohesion, a discussion among all stakeholders is urgently needed in order to draw attention to the potential problems and, according to need in the individual Member States, to develop strategies to solve them (e.g. in the area of public investments, job-creating innovation, job creation, and distribution and reduction of work).

6. Impact on welfare states and tax regimes

6.1. The strong growth in new, non-standard forms of employment that is caused by digitalisation implies that a growing share of the workforce does not contribute to or benefit from established social security systems such as public unemployment, health and pension insurance. In some Member States, this is already the subject of debates between social partners and governments. Combined with declines in overall employment rates, such developments may erode revenue for, and thus the overall effectiveness of, established tax and welfare regimes that rely on revenue mainly generated through levies on wages and systems of employer-employee co-financing and thus depend on high rates of standard employment.

6.2. This loss of effectiveness would pose serious threats to the fabric of the European social model, which is built on strong public engagement in the financing and provision of services of general interest and effective social security nets. However, successfully mastering the process of digitalisation is largely dependent on the effective provision of services of general interest, such as modern education systems and broadband infrastructure.

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6.3. The EU, national governments and the social partners should initiate debates with a view to defining political measures and legislation that ensure appropriate levels of mandatory social protection for the entire workforce — including the self-employed, crowd workers and workers in the sharing economy. It should be taken into account that diverging views may be represented within these groups.

6.4. Likewise, reforms to the tax systems need to be carefully examined to ensure similar levels of taxation for all forms of income, whether generated in conventionally organised sectors or in the sharing economy. The EU should encourage and coordinate corresponding reforms at Member State level.

6.5. In order to ensure the future sustainability of welfare systems and take the pressure off the labour factor, the possibility could be considered of using part of the ‘digitisation dividend’ for this purpose.

Brussels, 16 September 2015.

The President
of the European Economic and Social Committee
Henri MALOSSE